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b. 28	Form PTO-1449 Modified			Serial No. 10/024,818		
FB 19 2002	Cited by Applicant			et al.		
		Department of Commerce at and Trademark Office	Filing Date December 18, 2001	Group Not Yet Assigned		
	OTHE	R DOCUMENTS (Including Author	, Title, Date, Pertine	nt Pages, Etc.)		
1	AA	Albretsen, et al., "Optimal conditions with myc-oncogene DNA probes," Ar				
	AB	Augustyns, et al., "Incorporation of hexose nucleoside analogues into oligonucleotides: synthesis, based-pairing properties and enzymatic stability," Nuc. Acids Res., 1992, 20, 4711-4716				
	AC	Balzarini, et al., "Incorporation of 5-substituted pyrimidine nucleoside analogs into DNA of a thymidylate synthetase-deficient murine FM3A carcinoma cell line," Chem. Ab., 1985, 103(3), 16283a				
	AD	Beal, et al., "Second structural motif for recognition of DNA by oligonucleotide- directed triple-helix formation," <i>Science</i> , 1990 , <i>251</i> , 1360-1363				
	AE	Capobianco, et al., "One pot solution synthesis of cyclic oligodeoxyribonucleotides," Nuc. Acids Res., 1990, 18, 2661-2669				
	AF	Casey, et al., "Rates of formation and thermal stabilities of RNA-DNA duplexes at high concentration of formamide," <i>Nuc. Acids Res.</i> , 1997, 4(5), 1539-1552				
	AG	Chiang, et al., "Antisense oligonucleo expression by two distinct mechanism				
	АН	Civio, et al., "Synthesis of dinucleoside phosphates containing sulfur substituted nucleobase: 4-thiouracil, 4-thiothymine and 6-mercaptopurine," <i>Tet. Letts.</i> , 1992 , <i>33</i> , 69-72				
	AI	Connolly, et al., "Synthesis and properties of oligonucleotides containing 4-thiothymidine, 5-methyl-2-pyrimidinone-1-b-D(2'-deoxyriboside) and 2-thiothymidine," Nuc. Acids Res., 1989, 17, 4957-4974				
AJ Cooney, et al., "Site-specific oligonucleotide binding represses transcription of the human c-myc gene in vitro," Science, 1988, 241, 456-459						
EXAMINE	EXAMINER DATE CONSIDERED / U/rh					



Sheet 2 of 10

				Sheet 2 of 1		
Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary)			Docket No. GLIS-0143 Applicant Brian C. Froehler, et al.			
						* TRAINING
	отни	ER DOCUMENTS (Including Author	r, Title, Date, Pertine	nt Pages, Etc.)		
N	AK	De Clercq, et al., "Nucleic acid relate activities of 5-alkynyluracil nucleosid				
	AL	Egholm, et la., "Peptide nucleic acids achiral peptide backbone," J. Am. Ch		_		
	AM	Fedorovo, et al., "Complementary ad within a ternary complex," FEBS, 19		f double-stranded DNA		
	AN	Felgner, et al., "Lipofection: a highly procedure," Proc. Natl. Acad. Sci., 19		ed DNA-transfection		
AO Froehler, et al., "Oligodeoxynucleotides containing C-5 propyne analogs deoxyuridine and 2'-deoxycytidine," Tet. Letts., 1992, 33, 5307-5310						
AP Froehler, et al., "Triple-helix formation and cooperative binding by oligodeoxynucleotides with a 3'-3' internucleotide junction," <i>Biochem.</i> , 1992, 1603-1609						
AQ Froehler, et al., "Triple-helix formation by oligodeoxynucleotides containing carbocyclic analogs of thymidine and 5-methyl-2'-deoxycytidine," J. Am. Ch. 1992, 114, 8320-8322						
	AR	Goodchild, et al., "Structural requirements of olefinic 5-substituted deoxyuridines for antiherpes activity," J. Med. Chem., 1983, 26, 1252-1257				
AS Griffin, et al., "Recognition of thymine-adenine base pairs by guanine in a partial triple helix motif," Science, 1989, 245, 967-971				y guanine in a pyrimidine		
V	AT	Hamaguchi, et al., "The effect of electhelix," J. Am. Chem. Soc., 1962, 84,		of the deoxyribonuclate		
EXAMINE	R	1	DATE CONSIDERI	EDITI		



Sheet 3 of 10

ocket No. LIS-0143 pplicant rian C. Froehler, e	Serial No. 10/0 24,818					
	t al.					
ling Date ecember 18, 2001	Group Not Yet Assigned					
itle, Date, Pertinen	ıt Pages, Etc.)					
uence duplex DNA 00, 112, 2435-2437	by alternate-strand triple-					
and thermal stabili Acids Res., October	ty of DNA in aqueous 1977, 3537-3555					
Iverson, et al., "Nonenzymatic sequence-specific cleavage of single-stranded DNA to nucleotide resolution. DNA methyl thioether probes," J. Am. Chem. Soc., 1987, 109, 1241-1243						
derivatives and seque, 1985 , <i>67</i> , 785-789						
ated triple helix forming pH-independent Sci., 1992, 89, 37610						
atized oligodexoyrib l DNA," <i>Biochem</i> , 1	oonucleoside 1988, 27, 3197-3203					
e) synthetic DNAs c	ontaining ???," Nuc.					
Maher, et al., "Inhibition of DNA binding proteins by oligonucleotide-directed triple helix formation," Science, 1989, 245, 725-730						
Matteucci, et al., "Synthesis and crosslinking properties of a deoxyoligonucleotide containing N[6],N[6]-ethanodeoxyadenosine," <i>Tet. Letts.</i> , 1987 , <i>28</i> , 2469-2472						
BD Matthews, et al., "Analytical strategies for the use of DNA probes," Anal. Biochem., 1988, 169, 1-25						
ATE CONSIDERE	Di V/2/a					
d still d; at a still d; at a still d;	tle, Date, Pertinent tence duplex DNA D, 112, 2435-2437 and thermal stabilition of the probes," J. Am. derivatives and sequence of the probes," J. Am. derivatives and sequence of the probes, 12, 2435-789 and the derivatives and sequence of the probes, 13, 1985, 67, 785-789 and triple helix form g pH-independent of the probes, 13, 1992, 89, 37610 and proteins by oligonate of the proteins by					



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	Form	PTO-1449 Modified	Docket No. GLIS-0143	Serial No. 10/024,818		
19 2002		f Patent and Publications Cited by Applicant everal sheets if necessary)	Applicant Brian C. Froehler, et al.			
19 200		Department of Commerce at and Trademark Office	Filing Date December 18, 2001	Group Not Yet Assigned		
	ОТНЕ	CR DOCUMENTS (Including Author	r, Title, Date, Pertine	nt Pages, Etc.)		
N	of DNA by stable, hem. Soc., 1989, 111,					
	BF	Moser, et al., "Sequence-specific clear formation," Science, 1987, 238, 645-	_	DNA by triple helix		
	BG	Murakami, et al., "Highly sensitive deprobe. 1. Colorimetric and fluorometric 5587-5595				
	вн	Nielsen, et al., "Sequence-selective recognition of DNA by strand displacement with a thymine-substituted polyamide," Science, 1991, 254, 1497-1500				
	BI	Ono, et al., "Triplex formation of an oligonucleotide containing 2'0-methylpseudoisocytidine with a DNA dupliex at neutral pH," J. Org. Chem., 1992, 57, 3225-3230				
	ВЈ	Petrie, et al., "A novel biotinylated add]pyrimidine for labeling DNA probe				
	BK	Povsic, et al., "Triple helix formation physiological pH range," J. Am. Chen				
	BL	Praseuth, et al., "Sequence-specific binding and photocrosslinking of a and b oligodeoxynucleotides to the major groove of DNA via triple-helix formation," <i>Proc. Natl. Acad. Sci.</i> , 1988, 85, 1349-1353				
	ВМ	Quartin, et al., "Effect of lonic strength on the hybridization of oligodeoxynucleotides with reduced charge due to methylphosphonate linkages to unmodified oligodeoxynucleotides containing the complementary sequence," <i>Biochem.</i> , 1989, 28, 1040-1047				
BN Rahim, "Preparation of 5-prop-1-ynyl-1-(5-0-trimethyl," Chem. Ab., 1990, 113(25), 231937d						
EXAMINE	R	1	DATE CONSIDERI	ED Mula		



			Sheet 5 of 10				
For	rm PTO-1449 Modified	Docket No. GLIS-0143	Serial No. 10/024,818				
OF STATE	st of Patent and Publications Cited by Applicant se several sheets if necessary)	Applicant Brian C. Froehler, et al.					
Pa	S. Department of Commerce atent and Trademark Office	Filing Date December 18, 2001	Group Not Yet Assigned				
ОТ	HER DOCUMENTS (Including Author	r, Title, Date, Pertine	nt Pages, Etc.)				
№ BC	Rahim, et al., "5-alkynl pyrimidine n varicella-zoster virus," Antiviral Che						
ВР	Reynolds, et al., "Synthesis of thymi and sulfonamide linkages," J. org. C						
ВС		Robins, et al., "Nucleic acid related compounds, 38. Smooth and high-yield iodination and chlorination at C-5 of uracil bases and p-totuyl-protected nucleosides," Can. J. Chem., 1982, 60, 554-557					
BR		Shaw, et al., "Specific, high-efficiency, triple-helix-mediated cross-linking to duplex DNA," J. Am. Chem. Soc., 1991, 113, 7765-7766					
BS		Thompson, et al., "Molecular hybridization with RNA probes in concentrated solutions of guanidine thiocyanate," <i>Anal Biochem.</i> , 1987, 163, 281-291					
ВТ	Uhlmann, et al., "Antisense oligonuc <i>Rev.</i> , 1990 , <i>90</i> , 543-584	leotides: a new therape	utic principle," chem.				
BU	1 ' ' 11	Valko, et al., "Application of chromatographic retention data in a quantitative structure-nucleotide incorporation rate relationship," J. Chromatog, 1990, 506, 35-44					
BV	1 ' '	Valko, et al., "Correlation of nucleotide incorporation rate and HPLC retention parameters of substituted nucleosides," J. Liquid chromatog, 1989, 12, 2103-2116					
BV	, ,	Van Ness, et al., "The use of oligodeoxynucleotide probes in chaotrope-based hybridization solutions," Nuc. Acids Res., 1991, 19(19), 5143-5151					
Wasseur, et al., "Oligonucleosides: Synthesis of a novel methylhydroxylamine-linked nucleoside dimer and its incorproation into antisense sequences," J. Am. Chem. Soc. 1992, 114, 4006-4007							
EXAMINER		DATE CONSIDERE	ED 14h				



				Sheet 6 of 10		
	Form	PTO-1449 Modified	Docket No. GLIS-0143	Serial No. 10/024,818		
TPES	List of Patent and Publications Cited by Applicant (Use several sheets if necessary)		Applicant Brian C. Froehler, et al.			
19 2012 28		Department of Commerce nt and Trademark Office	Filing Date December 18, 2001	Group Not Yet Assigned		
TO LOW TO POST	ОТНЕ	ER DOCUMENTS (Including Author	r <mark>, Title, Date, Perti</mark> nei	nt Pages, Etc.)		
N	BY	Vlassov, et al., "Complementary addr stranded DNA fragment with alkylati 1986, 14, 4065-4076				
	BZ Vlassov, et al., "Sequence-specific chemical modification of double-stranded DI with alkylating oligodeoxyribonucleotide derivatives," Gene, 1988, 72, 313-322					
	CA Webb, et al., "Hybridization triggered cross-linking of deoxyoligonucleotides," Acids Res., 1986, 14, 7661-7674					
	СВ	Webb, et al., "Sequence-specific cross-linking of deoxyoligonucleotides via hybridization-triggered alkylation," J. Am. Chem. Soc., 1986, 108, 2764-2765				
	CC	Wigerinck, et al., "5-(5-bromothien-2-yl)-2'-deoxyuridine and 5-(5-chlorothien-2-yl) 2'deoxyuridine are equipotent to (E)-5-(2'-bromovinyl)-2-deoxyuridine in the inhibition of herpes simplex virus type 1 replication," J. Med. Chem., 1991, 34, 2383 2389				
	CD	Young, et al., "Triple helix formation inhibits transcription elongation in vitro," Proc. Natl. Acad. Sci., 1991, 88, 10023-10026				
	CE	van de Sande, "Parallel stranded DNA	A," Science, 1988 , 241,	551-557		
	CF	van der Krol, et al., "Modulation of eukaryotic gene expression by complementary RNA or DNA sequences," <i>Biotechniques</i> , 1988, 6, 958-976				
	CG	Ötvös, et al., "Substrate specificity of DNA polymerases. I. Enzyme-catlysed incorporation of 5-(1-alkenyl)-2'-deoxyuridines into DNA," Nuc. Acids Res., 1987, 15, 1763-1777				
CH Ötvös, et al., "Substrate specificity of DNA polymerases. II. 5-(1-alkynyl)-dUTPs as substrates of the kienow DNA polymerase enzyme," Chem. Ab., 1987, 107(23), 214012g						
EXAMINE	CR	1	DATE CONSIDERE	D 12/16		
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Sheet 7 of 10

	Form	PTO-1449 Modified	Docket No. GLIS-0143	Serial No. 10/024,818		
STPE)		f Patent and Publications Cited by Applicant everal sheets if necessary)	Applicant Brian C. Froehler, et al.			
		S. Department of Commerce Patent and Trademark Office Filing Date December 18, 2001 Not Ye				
COTRATO !!	отн	R DOCUMENTS (Including Author	r, Title, Date, Pertine	nt Pages, Etc.)		
Alderfer, et al., "Comparative studies on homopolymers of adenylic acid posdifferent C-2' substituents of the furanose. Poly(deoxyriboadenylic acid), poly(riboadenylic acid), poly(2'-0-methyladenylic acid), and poly(2'-0-ethyladenylic), "Biochem., 1974, 13(8), 1615-1622						
	CJ	Kielanowska, et al., "Preparation and properties of poly 2'-O-ethylcytidylic acid," Nuc. Acids Res., March 1976, 3(3), 817-824				
	CK	Ransford, et al., "2'-O-ethyl pyrimidine nucleosides (1)," J. carbohydrates N Nuclt., 1974, 1(3), 275-278				
	CL	Hobbs, et al., "Palladium-catlyzed synthesis of alkynylamino nucleosides. A universitative for nucleic acids," J. Org. Chem., 1989, 54, 3420-3422				
	CM	Kumar, et al., "Synthesis and antiviral activity of novel 5-(1-azido-2-haloethyl) a (1-azido-, amino-, or methoxyethyl) analogs of 2'-deoxyuridine," J. Med. Chem., 3 36, 2470-2474				
	CN	Leusink, et al., "Studies in group IV organometalic chemistry XXIV. Structure of products obtained in the hydrostannation of ethynes," J. Organometal Chem., 1967, 285-294				
	CO	Loke, et al., "Characterization of olig Natl. Acad. Sci., 1989, 86, 3474-3478		nto living cells," Proc.		
Robins, et al., "Solvent, not palladium oxidation state, is the primary determ successful coupling of terminal alkynes with iodo-nucleosides," <i>Tet. Letts.</i> , 31(26), 3731-3734						
	CQ	Al-Razzak, et al., "5-quinone derivati and inactivation of thymidylate synthe Med. Chem., 1987, 30, 409-419				
V	CR DeClercq, et al., "Thymidylate synthetase as target enzyme for the inhibitory activity of 5-substituted 2'-deoxyuridines on mouse leukemia L1210 cell growth," Molecular Pharmacology, 1980, 19, 321-330					
EXAMINE	R	1	DATE CONSIDERI	ED /2/2		



Sheet 8 of 10

	Form	PTO-1449 Modified	Docket No. GLIS-0143	Serial No. 10/024,818			
List of Patent and Publications Cited by Applicant (Use several 26 sheets if necessary)			Applicant Brian C. Froehler, et al.				
& TRAIN & PORTS		Department of Commerce nt and Trademark Office	Filing Date December 18, 2001	Group Not Yet Assigned			
	ОТНІ	ER DOCUMENTS (Including Autho	r, Title, Date, Pertin	ent Pages, Etc.)			
V	CS	Vincent, et al., "Synthese de nucleos heterocycle par couplages d'organozi desoxy-2' uridine catalyses par des co 25(2), 201-202	inciques avec l'iodo-5	-O-bis(trimethylsilyl)-3',5'			
	СТ	Wigerinck, et al., "5-(5-bromothien-2-yl)-2'deoxyuridine and 5-(5-chlorothien-2-yl) 2'-deoxyuridine are equipotent to (E)-5-(2-bromovinyl)-2-deoxyuridine in the inhibition of herpes simplex virus type 1 replication," J. Med. Chem., 1991, 34, 232 2389					
	CU	Herdewijn, et al., "Synthesis of 2'-5' antiviral and antitumoral nucleosides	•	_			
	CV	Robins, et al., J. Org. Chem., 1983, 4	8, 1854-1862				
	CW	Robins, et al., Tet. Letts., 1981, 22, 4	21-424				
N	CX	Vincent, et al., Tet. Letts., 1981, 22, 9	945-947				
EXAMINI	ER	1	DATE CONSIDER	RED /2/1/2			



Sheet 9 of 10

Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary)			Docket No. GLIS-0143 Applicant Brian C. Froehler, et al.			
		U. S	. PATENT DO	CUMENTS		
Examiner Initial		Document No.	Date	Name	Class	Subclass
\mathcal{N}	CY	4,415,732	11/15/83	Caruthers, et al.		
	CZ	4,458,066	07/03/84	Caruthers, et al.		
	DA	4,725,677	02/16/88	Köster		
	DB	4,959,463	09/25/90	Froehler, et al.		
	DC	5,264,564	11/23/93	Matteucci		
	DD	5,272,057	12/21/93	Smulson, et al.		
}	DE	5,399,676	03/21/95	Froehler		
	DF	4,904,582	02/27/90	Tullis		
	DG	5,264,423	11/23/93	Cohen, et al.		
	DH	5,440,040	08/08/95	Gronowitz	544	216
	DI	5,013,830	05/07/91	Ohtsuka, et al.	536	27
	DJ	5,034,506	07/23/91	Summerton, et al.		
	DK	5,204,455	04/20/93	Froehler, et al.		
	DL	5,256,775	10/26/93	Froehler		
	DM	5,466,786	11/14/95	Buhr, et al.		
	DN	5,495,009	02/27/96	Matteucci, et al.		
	DO	5,596,086	01/21/97	Matteucci, et al.		
W.	DP	5,484,908	01/1996	Froehler, et al.	536	24.31
V	DQ	5,840,867	11/1998	Toole, et al.	536	23.1
EXAMINE	R	10		DATE CONSIDER	ED / 4	ula ³



Sheet 10 of 10

	Form	PTO-1449 Modi	Docket No. GLIS-0143	Serial No. 10/024,818		
List of Patent and Publications Cited by Applicant (Use several sheets if necessary)			Applicant Brian C. Froehler,	Applicant Brian C. Froehler, et al.		
B TRANSPORT	U.S. Department of Commerce		Filing Date December 18, 2001	Group Not Yet Assigned		
		FOR	EIGN PATENT	DOCUMENTS		
Examine Initial	r	Document No.	Date	Country	Translation YES NO	
N	DR	0 415 901 A2	03/06/91	EPO		
	DS	0 375 408 A1	06/27/90	EPO		
	DT	0 486 477 A2	12/14/87	ЕРО		
	DU	0 492 570 A1	12/23/91	EPO		
	DV	WO 88/08001	10/20/88	PCT		
	D W	WO 89/12060	12/14/89	PCT		
	DX	WO 89/12061	12/14/89	PCT		
	DY	WO 90/06934	06/28/90	PCT		
	DZ	WO 90/15884	12/27/90	PCT		
	EA	WO 92/05186	04/02/92	PCT		
	ЕВ	WO 92/02258	02/20/92	PCT		
	EC	WO 92/05186	04/02/92	РСТ		
	ED	WO 92/06102	04/16/92	PCT		
	EE	WO 92/09705	06/11/92	PCT		
	EF	WO 92/10590	06/25/92	PCT		
	EG	0 269 574	06/01/88	EPO		
	ЕН	WO 91/06626	05/16/91	PCT ·		
	EI	0 251 786 A3	01/07/88	EPO		
	EK	0 286 028 A2	10/12/88	EPO		
N	EL	1,311,201	12/08/92	Canada		
EXAMINER 1				DATE CONSIDER	LED 12/23	